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ARCHIVES OF PEDIATRICS

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DISEASES OF INFANTS AND CHILDREN

JOHN FITCH LANDON, M.D., Editor

LEADING ARTICLES IN THIS NUMBER

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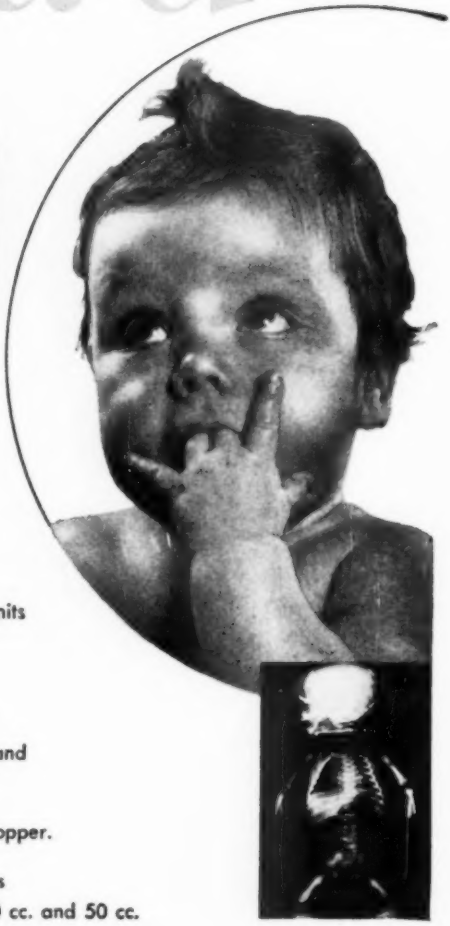

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(Continued from page 3)

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DEPARTMENT OF ABSTRACTS

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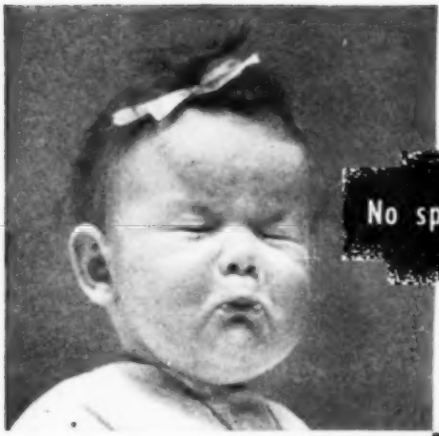

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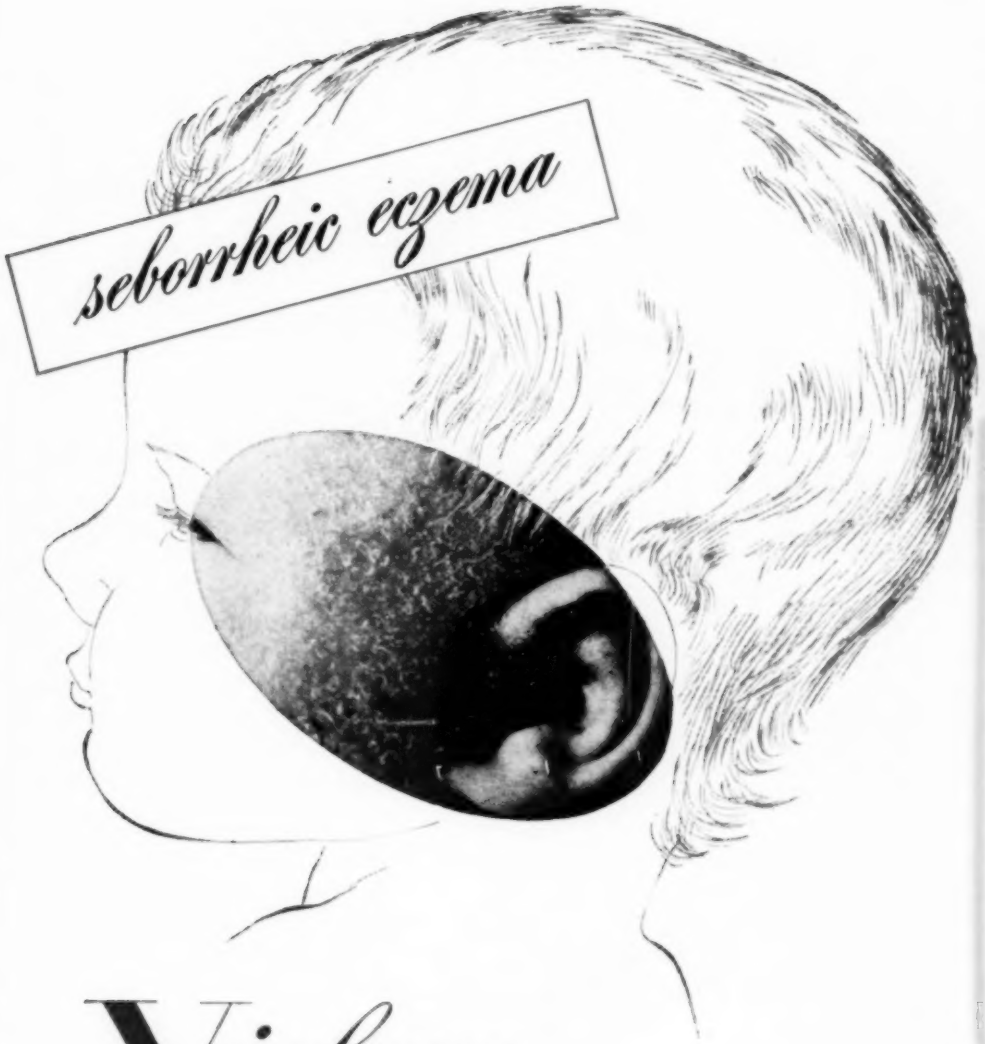

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ARCHIVES OF PEDIATRICS

VOL. 69 NOVEMBER 1952 No. 11

JOHN FITCH LANDON, M.D., Editor

STURGE-WEBER-DIMITRI DISEASE*

FOLLOW UP OF A CASE

R. H. SAKR, M.B., D.Ch., M.D.

AND

M. K. GABR, M.B., D.Ch., M.D.

Cairo, Egypt.

Sturge, in 1879, gave an account of the first case of facial nevus, convulsions and congenital glaucoma (Sturge, 1879). In 1929, Weber described a syndrome characterised by venous angioma of face, meninges and brain, associated with contralateral Jacksonian epilepsy and areas of intracranial calcification. In some instances spastic hemiplegia was described (Weber, 1929). Krabbe, in 1934, suggested the name of Sturge-Weber-Dimitri disease to the syndrome (Krabbe, 1934).

Van Der Hoeve considers the syndrome as a member of the group of phacomatoses or Mother Spot, which includes as well Von Recklinghausen's disease, tuberous sclerosis and Lindau's disease (Walsh, 1947).

Kalischer, in 1879, published the first post-mortem picture, and thereafter the vascular malformations characteristic of this syndrome have been revealed through operations designed to relieve epilepsy (Kalischer, 1897). These malformations are usually multiple venous aneurysms or worm-like veins which lie superficially in the pia arachnoid compressing the cortex or involving the veins penetrating the cerebral substance. Krabbe showed that the calcified patches, previously thought to be superficially situated, actually invade the cerebral cortex (Krabbe, 1934).

*From the Pediatric Department, Faculty of Medicine, Fouad 1st University, Cairo.

The cerebral hemisphere on the side of the angioma is often poorly developed; and as the skull follows the brain in development, retardation of growth of the cranium on the side of the lesion is present.

The nevus usually affects the area supplied by the trigeminal nerve, most oftenly the ophthalmic division. The nevus does not as a rule cross the midline but in some instances large areas on both sides of the body may be affected. Rarely the nevus may acquire a characteristically central position (Barrada et al., 1949). The color of the nevus is red-brown; occasionally it is pale and so may be overlooked, but careful examination will reveal that the affected skin is somewhat raised and has a slightly uneven surface. Nevi are often present at birth, but become more apparent during early childhood.

In 1936 Greenwald and Koota stated that convulsions, the most frequent symptoms, are often repeated and of the Jacksonian type. They are usually contralateral to the cutaneous lesion but they frequently become generalized (Greenwald and Koota, 1936). Convulsions may lead to hemiparesis or even to hemiplegia though Greenwald and Koota state that hemiplegia may, in exceptional cases, precede the convulsions.

CASE REPORT

The patient, S. K., a boy of five years, was admitted to Fouad 1st. Children's Hospital on June 8, 1949, with the complaint of inability to hold things with his right hand, weakness and shortening of both right upper and lower limbs, periodic attacks of drowsiness and a facial nevus.

The mother, a healthy woman of 35 years, noticed the nevus since birth. At the age of five months the patient had the first convulsive attack which started by tremors of the left upper lid, i.e., on the same side as the cutaneous nevus and soon the left upper and lower limbs were thrown into tonic and clonic contractions. The attack lasted two hours and stopped to recur a few hours later. During the first three days following these seizures the patient had several similar attacks.

On the fourth day, the convulsions became generalized spreading to the contralateral side, affecting the right half of the face, right upper and lower limbs and repeated in the same frequency

as before. On the seventh day, the left side became quiescent, while convulsions continued on the right half of the body, i.e., the contralateral side. Three days later the patient was relieved, but the mother cleverly noticed that sucking was prolonged and that the child's grip over the breast was not so tight as before; she also observed weakness of the baby's right arm. Two months later the baby had a second convulsive attack confined to the right side and thereafter seizures recurred regularly at four months' intervals.

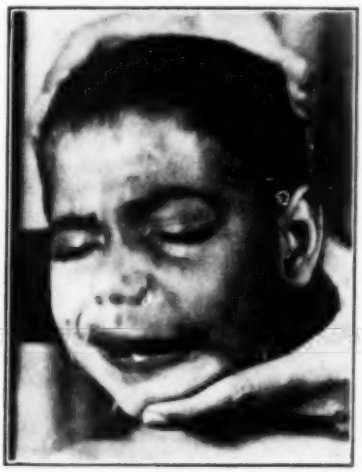

Fig. 1. Hemangioma of face.

Three years ago, convulsions ceased and were replaced by tonic contractions of the right half of the body, characteristically preceded by a febrile episode of 3-4 days duration, during which the patient complained of throbbing left sided headache (mainly occipital), yawns, cries, vomiting and inability to retain any food either liquid or solid. The eyes become engorged, lids swollen, nevus deepens in color and swells. The patient then becomes drowsy for the next few days, grinding his teeth, incontinent for both urine and stools but he does not lose consciousness. On recovery the patient remains feeble for a week, unable to move right upper and lower limbs, complaining of their heaviness, but the hemiparesis does not get worse. Such attack was noticed while

he was in hospital. No similar or related troubles in the family were present and during all pregnancies the mother was in perfect health, giving birth to three healthy children.

Examination. Both nutrition and general development of the child are normal. A dull red nevus covering the left cheek, forehead and temple, extending posteriorly to the left ear and inferiorly involving the left half of the upper lip, is noticed. The left upper lid is also involved. The distribution thus corresponds to areas

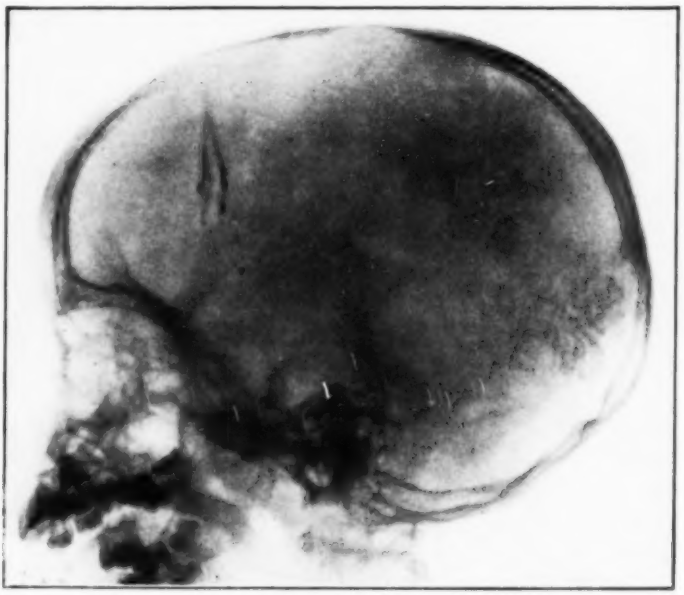

Fig. 2. Skull showing the calcified hemangioma.

supplied by the first and second branches of the fifth nerve (Fig. 1). The left half of the skull is underdeveloped, this being most marked at the occiput. The child is quite alert although behavior disorders and bad manners are manifest; apparently due to some degree of mental deficiency.

Neurological examination reveals right sided hemiparesis. The right arm is held flexed, while the right leg is extended. Spasticity is more manifest in the upper than in the lower limb. The tendon jerks are exaggerated although no clonus can be elicited. Babinski

is positive and the abdominals are absent. The shuffling hemiplegic gait is manifest when the child is induced to walk.

Apparently no sensory disturbances are present, while phonation, hearing, deglutition and the rest of the cranial nerves are intact.

Examination of the eyes revealed diminished left visual acuity and limitation of the left visual field. Ocular tension is normal on both sides and the left fundus shows generalized congestion and

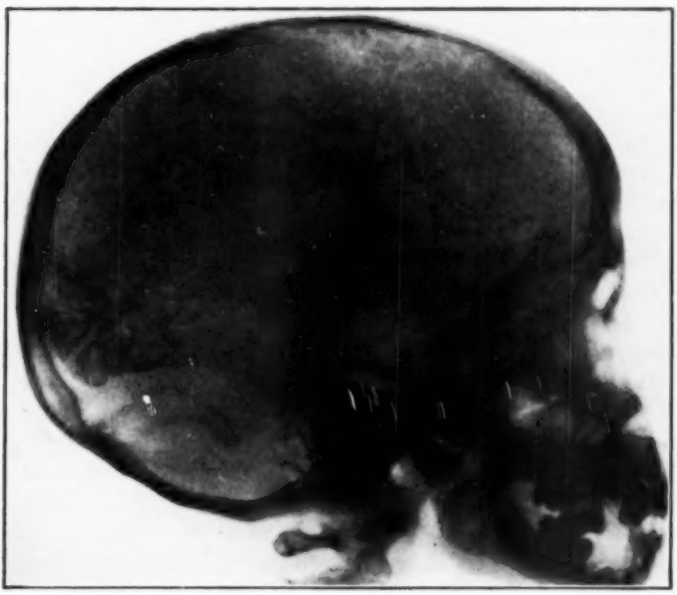

Fig. 3. Skull showing increase in calcification.

some engorgement of the vessels in comparison with the right normal one.

Radiological examination of the skull shows calcification of the convolutional type marked in the left occipital region (Fig. 2).

The other systems are free; and there are no changes in the cerebrospinal fluid, blood or urine.

This case was followed up tentatively for the next one and a half years and was admitted to hospital on December 14, 1950. The chief observations were the regular periodic occurrence of seizures

preceded by febrile episodes. Shortening of both right upper and lower limbs associated with hemiatrophy of the face and the skull, as scoliosis, were more marked. The area of the nevus, however, was the same. The patient was more irritable than ever and very difficult to please with very evident mental retardation. Left visual acuity showed marked diminution, and more limitation of the left field of vision; but the patient was so incooperative that the visual field could not be plotted. Fundus examination showed the same picture as observed before. Radiography revealed a definite increase in the size of the calcification, both in density and in extent (Fig. 3).

COMMENT

The previous case is a typical example of the vascular encephalotrigeminal syndrome commonly known as Sturge-Weber-Dimitri disease (Walsh, 1947). The reported case, however, shows some peculiar and interesting features.

The increase in the size of the calcification within a short period of one and a half years is quite evident in the shown radiograms and is worth reporting.

The cause of the convulsions in this syndrome is debatable. Cushing and Bailey suggest that either recurrent hemorrhages or thrombosis of branches of the middle cerebral artery might be responsible (Cushing and Bailey, 1928). In our case no evidence of either condition is present. The cerebrospinal fluid obtained following the convulsive seizures was free of blood, while if thrombosis was present, an increase in the degree of the hemiparesis would be expected to follow the attacks. Probably simple congestion of the angioma is responsible for the fits since engorgement and swelling of the nevus as well as congestion of the fundus is noticed during the attacks and subsides following it. Various causes might be responsible for this congestion and in our case the febrile period preceding the attack might be provocative.

The febrile episode which precedes the attack for 3-4 days is another most characteristic symptom of this case. Whether it is due to an intercurrent fever precipitating the convulsions or to hypothalamic involvement by the pathological process is difficult to tell. The periodicity of the attacks is another feature difficult to explain.

A last abnormal feature to be reported in this case is the peculiar onset of the first few attacks on the same side of the nevus. This may suggest extension of the nevus to the left side. The x-ray picture, however, as well as restriction of the attacks later on to the contralateral side are strong evidences against such speculation. Angiography would have been more helpful to clarify this point but unfortunately the mother strongly refused such a manipulation.

Fundus changes in the form of angiomata are frequently present in many of the reported cases. Glaucoma is also commonly described. In our case the ocular tension is normal and apart from simple congestion during the attacks the fundus is normal.

CONCLUSION

A case of Sturge-Weber-Dimitri disease in a boy aged six and a half years is reported. The follow-up of the case is of particular interest showing the increase in calcification and the effect of venous angioma on mental, psychic and physical development. This progressive increase in the size of the x-ray shadow with concomitant calcification is in harmony with the progressive deterioration in the clinical state of the patient. The occurrence of hyperthermia as a prodroma is a characteristic feature, and a possible explanation is put forward. The regular periodicity of convulsive seizures is strange and difficult to explain.

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NURTURE and/or NATURE CAUSE READING DIFFICULTIES?*

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There are many erroneous ideas about the causes for reading difficulties. This paper is presented as a review of a monograph by Bertil Hallgren titled "Specific Dyslexia (Congenital Word-Blindness), a Clinical and Genetic Study". As supplementary to the review a case report of a dyslexiac is given in detail to illustrate the disastrous effects where the "hereditary factor" had been presumed as the causative factor.

It is a matter of vital importance that Hallgren's monograph be reviewed. The danger of accepting or implying that dyslexia is hereditary without proper evidence should be challenged, and it is mainly about his conclusions on this point that this review centers. In order to get a careful review from several different approaches, I asked Dr. Beverly Cox, Psychologist, Dyslexia Memorial Institute, at Northwestern University, Dr. A. R. Gilliland, Professor of Psychology, Northwestern University, Dr. Alfred Schmieding, Dean, Concordia Teachers College, and Dr. Frank M. Lorimer, Psychiatrist, Dyslexia Memorial Institute to collaborate.

Hallgren's monograph is an outstanding contribution to the literature of a careful statistical and theoretical study of 276 cases of "specific dyslexia". Including the siblings and parents, a total of 706 persons were incorporated in the investigation.

In addition to the 276 cases, the author reviews carefully over 200 studies of dyslexia and related problems, which makes the monograph an excellent source of reference material.

Specific dyslexia is defined as reading and writing disability.

We might think of reading as a taking in process, with expression involving the oral organisms mainly, whereas, writing is an active giving out process. If the factors of dyslexia are to be presumed of genetic origin, one should expect different genes or diverse combination of genes to underlie the two processes. It would seem advisable to further isolate the reading and writing processes to establish the causative factors.

Since Hallgren attempts to establish specific dyslexia as an

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hereditary trait, it is confusing that he uses the term "congenital word-blindness" synonymously, even though in medical literature it has caused great controversy. Congenital would seem to mean a condition caused by exogenous injuries rather than coming from within the cell. Furthermore, Hallgren must be criticized adversely in his differential diagnosis of hereditary and secondary dyslexia. How does he solve this knotty problem? It is simple. If a dyslexiac child has parents or sibs who are dyslexiac, the diagnosis is hereditary disability. If there are no dyslexiacs in the family, the diagnosis is secondary disability.

In general, the findings of the study are quite similar with those found by other investigators—except Hallgren's conclusions. However, one gains the impression that Hallgren worked on a preconceived idea and has attempted to prove it. As illustrative of his logic, he states: "The *fact* that specific dyslexia can be shown to be hereditary in the overwhelming majority of families in which the patient has some nervous disorder is a strong argument a posteriori against the hypothesis that specific dyslexia is secondary to the nervous disorders in these cases". Discussing physical illnesses Hallgren states: "I consider that such illnesses only affect the child's reading ability that would cause him to be away from school during the first two years". This would hardly be considered adequate criteria for physical illnesses, for in our experiences we have seen great influences in such ailments, as glandular imbalances and malnutrition, which would not necessarily mean that the child would miss school.

With reference to cerebral disorders the author has held to a rather fixed neurological type of examination. Here again it becomes apparent the necessity of perfecting further tests to determine the cortical function, such as the electroencephalogram, which Hallgren does not mention. To demand that an outstanding neurological condition be found one would be getting into the spastic field, which would be ruled out in his study. In specific relationship to his ruling out emotional disturbances as being of importance, he assumes in his conclusions that the incidence of emotional disturbances in children with reading problems are no higher than the normal population. His assumption is made on a statement: "The greater part of the present material has been taken from the Clinic. It can be considered as probable a priori

that specific dyslectics from the Clinic consists to a relatively large extent of children in whom this disorder is complicated by emotional and other mental disturbances". Hallgren admits and his statistics demonstrate that in his cases emotional disturbances were extremely common. Yet in his conclusions, he dismisses this by simply stating he had taken the cases from an emotional-psychiatric clinic, therefore, he can assume that the incidence is not any larger than in the normal population. This does not seem logical reasoning.

Some literature dealing with association between reading difficulties and visual defects were discussed. Among other conditions mentioned, he called attention that compensated muscle imbalance, such as phorias of high degree, does not affect interpretation of symbols, but efforts to see binocularly can be said to discourage reading. In his material it was felt that the ocular disturbances were of little essential importance as regards dyslexia. He states that in none of the cases in which glasses were prescribed had there been subsequently noted any marked improvement in reading and writing. He apparently failed to consider abnormalities of the eyes as only a part of the symptom complex in retarded reading.

Because the author found in 80 per cent of his cases of dyslexia that one of the parents was also dyslexic, he concluded that heredity was the casual factor. On the surface this appears to be a valid reason for saying that hereditary factors are of paramount importance in reading disability. Certainly the author has proved that reading difficulties tend to run in families. However, does such a study prove that the trait runs in the family because it is inherited or because the same environmental factors also tend to run in families?

As illustrative, some famous history studies are presented which years ago were believed to have proved the importance of heredity, and which are now just as frequently used by the environmental school to indicate the importance of environmental factors. The following quotation is from L. F. Schaffer's "The Psychology of Adjustment": "An early family study in the United States was that of the Jukes family, first reported by Dugdale in 1877, and brought up to 1915 by Estabrook. Of the then traceable surviving descendants of the family of allegedly feeble-minded sisters with

which the history starts in the eighteenth century, 110 were mentally defective and 83 intemperate, while only 171 of a total of 1258 were described as industrious. Even more impressive is the history of the Kallikak family described by H. H. Goddard in 1912. Martin Kallikak, a soldier of the revolution, had an illegitimate son by a feeble-minded girl, from whom 480 descendants were traced. Of these, 143 were described as feeble-minded, 292 of uncertain intelligence, 36 illegitimate, 33 prostitutes, 24 alcoholics, 3 epileptics and 3 criminals, while only 46 were known to be normal individuals. Later, Martin Kallikak married a normal girl of good family, from which union 496 descendants have been traced, thereby offering something of a control. Of the second line of descent only 1 was feeble-minded, 1 sexually loose, 2 alcoholics and 1 had "religious mania," the remaining 491 being normal, many of them successful business men and eminent members of the profession.

"Studies of this type prove that almost any kind of defect may run in families, but why they were ever considered as evidence concerning heredity puzzles the present-day observer. Researchers who put their faith in family histories seem to have utterly ignored the pertinent fact that children of the Kallikak inheritance were also reared in Kallikak environments. The observed results may be as much due to the social surroundings and to the cultural handicaps as to defective genes. In all probability, the Kallikak defects were due to a combination of the two factors, to different extents for various traits according to their degree of plasticity.

"The error of considering family histories as evidence of heredity illustrates the danger of taking a technique from one field to another without also taking the corresponding precautions. Much valuable information concerning heredity has been gained from experiments in which the occurrence of a trait in plants, insects or lower animals has been observed through successive generations. In these experiments, however, environmental factors have been rigorously controlled. Differences appearing in rats would be considered hereditary only if they appeared under constant conditions of food, air, hygiene and other pertinent factors. Human family studies are valueless, because of the impossibility of controlling environments to a sufficient degree. . . . The family

history studies, then, offer no conclusive evidence as to the relative effect of heredity or environments on mentality or character. While some of the unfortunate traits of the Jukes or the Kallikaks may really be due to inheritance, other proofs are needed to establish the fact. Familial traits may be hereditary, or may be learned from generation to generation, or may result from a composite of heredity and learning. The mere fact of running-in-families does not tell which of these alternatives is correct."

Now unless Hallgren has shown some kind of patterning in the inheritance of dyslexia which could only be obtained by *nature* rather than *nurture;* his figures are inconclusive. He can say "nature" and the environmentalist can say "nurture."

Hallgren, in his book used as his principal evidence that dyslexia is hereditary in his three groups; (1) where both parents had reading difficulties, (2) where only one parent was affected, and (3) where neither parent had dyslexia. The author used the evidence of distribution of cases followed the sort of distribution that would be expected because of hereditary causes. Using the Chi square technique he showed that in group one, there were approximately the same number of cases of dyslexia as would have occurred if the condition was inherited as a single trait, and genes for it present in both parents. The deviation from this ratio was not greater than that which might be expected by chance. The distribution of cases for groups two and three also conformed to their expected distribution within the range of chance. However, the author fails to point out that this same condition would exist, i.e., the children would likely have difficulties if the cause is environmental rather than hereditary. The same arguments may be used either as a basis for believing that the dyslexia was caused by hereditary or environmental causes and under the experimental circumstances it is impossible to determine whether hereditary on the one hand or environment, or a combination of the two, as the cause for the condition of the patient. To present the material another way, you would get the same distribution of cases if both parents would have reading difficulties, whether the cause was hereditary or environmental. Likewise, when only one parent had reading difficulty, then there would be less likelihood of the child having reading difficulties. And when neither parent had reading difficulty there would be still less likelihood of the child having dyslexia. This distribution, shown by the use of the

Chi square method, in no way proves or is even evidence for either hereditary or environmental cause of dyslexia.

It would seem, too, that before we ascribe dyslexia to genetic origin per se it would be necessary to eliminate all peripheral and functional disorders. The whole personality of the child must be taken into consideration and an examination of the child's problem must be made from every viewpoint. This requires a complete history from every aspect; physical and mental examinations, including intellectual and emotional appraisals; social investigations; educational achievements, including special abilities and disabilities, and habits of work and play. Special attention should be paid to the senses and equipment concerned with reading difficulty, such as ocular, auditory and vocal functions. Also particular attention should be paid to the child-parent relationship.

Experience demonstrates that only occasionally one can not find an observable factor or combination of atypical functional factors which can be considered primary in a dyslexiac.

One must raise the question, how many of Hallgren's cases would have improved considerably under broad therapeutic conditions. Presumably, if dyslexia is transmitted genetically, one might expect a resistance to remedial measures, that would be equal to the stubbornness of feeble-mindedness. Practice does not, however, bear this out.

Although Hallgren's basic theory of genetically transmitted specific dyslexia is not accepted, there is nevertheless a possibility that heredity may occasionally contribute circumstances that predispose to dyslexia; and his thorough and painstaking study is, therefore, appreciated. Acceptance of the hereditary concept would be disastrous, for then the parents, teachers, and particularly the child would consider the condition hopeless and treatment would be doomed to failure.

The causal factors may be central, or peripheral, or both, and under abnormal environmental and functional changes appear as a syndrome, with many ramifications extending into the emotions, health and education of the child. This syndrome, dyslexia, is characterized by an inability to learn to read properly, even though the individual may have normal or superior intelligence.

In all of these perplexing problems, with few exceptions, it can fortunately be demonstrated that dyslexia does yield to treatment.

But it takes the best that medicine, psychiatry, psychology and education have to offer. And more than that, it will take a high degree of cooperation of specialists in these fields, which unfortunately too often is not there.

CASE REPORT

L.E. Complaint: Patient had been unable to achieve scholastically ever since starting to school. Teachers had to help him in the first grade. Patient had never been interested in reading or school. For the last four years he had been in sight-saving classes where the teachers would read to him. Parents and paternal grandparents believed the difficulty was due to hereditary traits. They stated there had been eye difficulties for three generations in the paternal lineage.

General Physical: The patient, a boy of 15 years 9 months, with height 66.5 inches and weight 142 pounds.

Family History: The parents are each 44 years old, living and well, excepting the mother has a duodenal ulcer. The father was a puny child but he has been well since getting married, 20 years ago. The paternal grandfather, aged 65, is living and well although he has been a neurotic for the past 18 years. Grandmother, aged 66, living and well but had gall bladder colic attack recently. Maternal grandparents are both dead; grandfather died at the age of 71 with apoplexy, the grandmother died at the age of 32 with puerperal sepsis.

Medical History of the Patient: The mother gained 25 pounds during pregnancy. Patient weighed 7 pounds 10 ounces at birth and gained normally in height and weight from the beginning. He was breast fed for 8 weeks. He was circumcised at birth. His first tooth appeared at 1 year of age and he nearly had convulsions when each new tooth erupted. He talked and walked at 1 year. At six years of age he had measles and later, when he started to school during his seventh year, he developed stomach trouble with vomiting and headaches which persisted intermittently for four years. At the age of 10 years he had scarlet fever which was followed by a streptococcus infection of throat for six weeks. Enuresis still persisted.

Physical Examination: The patient's appearance was excellent, slender and erect. The chest, heart, lungs and abdomen were

negative. The reflexes were sluggish. Temperature, pulse and respiration were normal. The basal metabolic rate was +5 per cent. Blood count: hemoglobin 97 per cent, R.B.C. 5,300,000, W.B.C. 6,400, polys 49 per cent, lymphs 42 per cent, monos 8 per cent, eosins, 1 per cent. Urine: alkaline, specific gravity 1.017, albumen and sugar, negative. Microscopical: few crystals, with little mucus. There were no recommendations from the general physical viewpoint.

Vision: Upon entering school, which had been delayed due to illness during his sixth year, he was taken to an ophthalmologist for an examination. At that time the physician warned the parents that the patient had an hereditary condition of the eyes which predisposed to retinal detachment. Although, at that time the vision in the right eye was practically normal, while that of the left eye was slightly below normal, the doctor advised against athletics. One year afterwards the retinal detachment occurred in the left eye. Since then he has been unable to see much more than light with that eye.

Examination: Visual acuity, R.E. 20/40 without glasses, 20/20 with glasses. L.E. Light perception only. Refraction of R.E. found one diopter of hyperopic astigmatism. Fundi: R.E.-normal. L.E.-complete retinal detachment except a small area in the superior portion. There were several small hemorrhages in the portion which was still attached.

The analysis of the reading graph made while patient was reading second grade material revealed the rate was 56 words per minute, with 300 fixations per 100 words, giving the span of recognition as 0.33. There were 70 regressions per 100 words.

Recommendations: Metronoscope for speed and to correct habit of backward sweeps. Also continue with glasses.

Hearing: The examination of the ears showed that both drums were normal. The whispered voice as well as conversation could be heard normally. An audiogram was made which was normal in all frequencies.

Psychiatric Appraisals: The parents reported the problem to be difficulty in reading. He guessed at words. The patient spelled words and then pronounced them but did not comprehend their meanings. When oral examinations were given he seemed to have been an A student.

The parents described L.E.'s personality as, affectionate, co-operative, even tempered, no tantrums, never holds grudges, not a perfectionist, nor is he overly neat. He gets along well with other children. Forgetful of duties of which he has very few and has to be reminded frequently. The radio gets considerable attention. In fact, anything that doesn't require reading commands his attention.

Enuresis persisted but there had been no ridicule nor scolding for it. Also nail biting was present.

The father was never interested in education although he finished two and a half years of college. The mother, a registered nurse, wants her children to have material things, but she is more insistent on education. Both she and her husband deny putting too much pressure on patient in school work.

Patient agreed that he was slow in reading and that he was quite sensitive about it earlier. He denied that any one had teased him about it nor that he felt that he was "dumb." His friends were few. Kenny, his closest friend, is also in the sight-saving class and is inferior mentally. The patient stated: "I pick dumb friends because I can do things better than they can."

The boy appeared relaxed, honest, outspoken, with spontaneous material offered, and was not evasive whatsoever. There seemed to be good relationship within the family constellation. There was vague evidence that he may have had some antisocial tendencies for he hit a small girl during a slight argument and also smeared windows and counters of neighborhood stores with pie material which he reported. Patient had feeling of inferiority probably based on opinion of organic defect (eye) to which he had developed a compensatory mechanism of "I don't want to" attitude. He expressed his feelings by stating, "I never have confidence in myself except when I am in the woods."

The electro-encephalogram record showed 11 per second activity in all leads. No focal abnormality. No seizure discharges. During period of sleep, normal sleep activity recorded. No evidence of disorder in the accessible cortex.

Impression: He was generally a normal boy emotionally. Pressures of undue nature were not elicited. Patient had developed a defeatist attitude and feeling of inferiority probably due to opinions expressed by paternal grandparents, especially by his grandmother.

Psychological Findings: Test Results (January 5) Wechsler-Bellevue:

Verbal scale I.Q.	106
Performance scale I.Q.	116
Full scale I.Q.	113

His work methods were quiet and careful. He used the full time allowed for a test even if he could not progress past the first problem. An exception to this was when patient formed a "set idea" as to what was required and then never checked to determine if he was following directions. It was worthy of note that he was excellent on block arrangement but would often start on a preconceived and incorrect design to follow through on it without referring to pattern for a check on his work. He was in seventh grade.

	Progressive Achievement Tests Grade Placement	Intermediate A Percentile
Reading vocabulary	3.4	0
Reading comprehension	3.0	0
Total reading	3.2	0
Arithmetic reasoning	3.4	0
Arithmetic fundamentals	5.1	5th
Total arithmetic	4.8	5th
Spelling	3.0	0
Language	3.2	0
Total	3.6	0

California Test of Personality. Percentile Rank:

Self adjustment	45
Social adjustments	30
Total adjustments	40
Sense of personal freedom	90
Freedom from withdrawing tendencies	70
Freedom from antisocial tendencies	65
Family relations	90
Self reliance	10
Social standards	10
Social skills	5
School relations	10

During the psychological interview the patient asked many questions: Why he was so rebellious at school when he wanted to leave the playgrounds when forbidden to eat elsewhere than in the school cafe? Why he blamed the teacher for things when he really knew she was right? Why he could read signs in the forest, when he can't read otherwise? Why he is so smart in so many ways but can't learn school work, especially reading?

His drawing was excellent. He wanted to know why he remembered the particular scene from his trip to the mountains last summer? Why the drawing was necessary? Why he couldn't create from imagination, except once in a while? He could not create a story relative to the drawing.

Summary of Psychological Examination: High average intelligence—retarded four years in his over all achievement—maladjusted in some phases of personality— will not relate to factual material—strongly intuitive; works mostly on hunches;—weakest in perceptive function. It is very difficult for such an individual to come to terms with factual material. Patient said: "I hate anything in school when it gets hard even though I know I could learn to do it. I want it to be easy." So long as patient does not read he is excused from the burden of almost all factual or perceptual pursuits. Patient is old enough to realize the difficulty as *his*, not his parents' or his teachers'. He said he had never bothered to worry about or work hard on reading.

The patient recognizes that he wants to go *his own* way to develop his own individuality. But in order that he do this he must understand it is necessary to conform to established customs, e.g., spell as convention dictates rather than phonetically as his inclination dictates.

Retest—(Oct. 20) Progressive Achievement 8 B.

	Grade Placement	Intermediate B. Percentile
Reading vocabulary	4.0	0
Reading comprehension	4.4	0
Total reading	4.1	0
Arithmetic reasoning	4.0	0
Arithmetic fundamentals	5.0	0
Arithmetic total	4.7	0

Language	4.7		0
Spelling	3.5		0
Total achievement	4.5		0

Achievement—Age 119 Months

Comments: Poor attention, did not work well, nervous and fidgety—didn't try very hard. The examiner did not think the test was a good measure of achievement.

Education: The patient knew a large majority of the words on the Dolch List, pertaining to reading and spelling. However, he was unable to recognize in context the very words he knew so well on the list. Oral reading on second grade level was hesitant and uncertain. Read orally—"as" for "so", "as" for "that" and "a" for "the". Extremely limited in phonics. Study habits were atrocious, especially spelling.

Voice: The speech structures were normal. Breath control was adequate. His voice quality was normal except low in testing situation. No speech correction necessary.

Summary and Recommendations (based on staff conference): Patient was high average in intelligence, retarded about four years in his over all achievement; more so in reading. He had high ability in block design and object assembly. Seemed to have formidable artistic and mechanical ability. His personality traits were—lonely, frustrated, loss of confidence, enuresis, affectionate, good sense of humor, and excellent family relationship. He needed development of social skills and feeling of belonging and association with own age groups. Especially, convince parents and patient that he had high average intelligence. Discourage perfectionism. Minimize hereditary factor in enuresis and his inability to read. The early illnesses of the patient probably influenced his attitude and achievement in the first years of school. The explanation of so-called "hereditary factor" through association with grandmother became very apparent in conference with the parents following the staff conference. The paternal grandparents had discouraged the parents in bringing the patient to the Institute because both the father and grandfather had had reading difficulties, and in their opinion the difficulty was hereditary so therefor treatments were hopelessly doomed to failure.

Help patient understand that the development of his own individuality was dependent on his overcoming his reading problem

i.e., he would not lose but would find himself through reading. He must be made to understand that the problem was *his* problem not that of the adults around him, parents, grandparents or teachers. The responsibility was to be thrown on *his* shoulders at his ability level with as little help as possible.

Continue to wear glasses and also use metronoscope to stimulate interest, to increase speed and to overcome the habit of regression.

Progress: Within nine months he had gained a year in his scholastic achievement, which was considered satisfactory, since he had reached only the middle of the third grade in the previous nine years of his school life. He had, furthermore, increased his ability to recognize letter groups which he applied to whole words in their pronunciation. He had improved considerably in his study habits. With that gain he still lacked confidence, was dependent and infantile. The patient liked science but other reading materials he was willing, as he stated, "people can read to me." Counseling and guidance were naturally continued with the hope that eventually the patient will take over and read for himself with pleasure. With the evidence of the gain in school subjects, plus the change of the patient's attitudes toward *his* problem, one must conclude that the "hereditary factor" was not to be considered as causative in this case.

In consideration of the improvement, not only in this case but in many cases where heredity was supposed to be the cause, Hallgren's theory can not be accepted nor even implied.

339 East Chicago Avenue.

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AMMONIA DERMATITIS*

Comparative Study of Diaperene® Chloride Ointment

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Diaper rash in infants represents a cause of morbidity and a continuing annoyance to mothers. This dermatitis was described as early as 1886 by Jacquet[1] as diaper dermatitis, and is known most commonly in this country as diaper rash. The true nature of this disease was established by Cooke[2] in 1921, when he demonstrated that the irritation of the skin was due to ammonia. He proved conclusively that the presence of ammonia was due to the action upon urine of a urea-splitting organism, B. ammoniagenes, found in the feces. More recent investigations have confirmed this finding,[3] and work on ammonia dermatitis in the adult[4] has revealed that other urea-splitting organisms can result in the same chemical reaction, liberating ammonia and thus irritating the skin.

Benson and collaborators,[3, 5] and Nagamatsu and collaborators[4] have shown the effectiveness of methyl benzethonium chloride (Diaparene® Chloride) in the prophylaxis and treatment of ammonia dermatitis when used as a diaper rinse.

In practice, there is a tendency for mothers to apply an ointment to the affected area as an adjuvant therapy. The theory involved in treating the diaper with a non-volatile antiseptic is that the urine picks up the antiseptic from the diaper and carries it on to the skin. It is thus brought into direct contact with the urea-splitting organisms and effectively inhibits their deleterious action. A water-repellent ointment, superimposed between the diaper and the skin obviously defeats the purpose of treating the diaper and, therefore, a water-miscible ointment containing the same antiseptic is indicated. A clinical study was made to establish whether the water-miscible ointment containing the antiseptic is more efficacious than the ointment base alone.

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Diaparene® Chloride Ointment used in this project was supplied by the Homemaker's Products Corporation, New York.

METHOD

A total of ninety infants was studied. All cases were diagnosed as ammonia dermatitis of varying degrees of severity. All were under the care of the same medical and nursing staffs. External cleansing and attention to diaper changes were observed as usual. The ointment containing methyl benzethonium chloride was applied to fifty-eight infants over the area of diaper dermatitis at each diaper change.

A control group, consisting of thirty-two infants with diaper dermatitis, was treated with the same regime, except that the ointment base alone was used, omitting the active ingredient. The medical and nursing staffs were not cognizant of which ointment they were using.

RESULTS

There were fifty-eight cases in the group treated with the active ingredient. Forty-two, or 72 per cent, were classified as mild, while sixteen, or 28 per cent, were severe. In this series of fifty-eight cases, thirty-one, or 53 per cent, were found to be healed at the end of their study period which ranged from 1 day to 3 weeks twenty-four, or 41 per cent, were improved and three, or 5 per cent, were found to be unimproved under the course of treatment. Thus, 94 per cent were either healed or improved by the use of methyl benzethonium chloride ointment. Improvement in this group was most significant in the severe cases. Eleven of these sixteen were completely healed and five were definitely improved under treatment. There were no cases which were resistant to treatment in this series. In the mild cases, nineteen were improved, twenty healed, three unimproved. Thus the favorable response to treatment with the ointment containing the active ingredient was 93 per cent.

In the control series of thirty-two cases, there were twelve mild and twenty severe cases. Application of the ointment consisting of the base alone without the active ingredient showed twenty-four unimproved and eight improved. Six of those improved were in the mild group, and two in the severe (Table 1). Thus, this finding of 25 per cent improvement is consistent with our experience in treating diaper rash with bland ointments and frequent diaper changes.

There were no instances of toxicity, local irritation, or sensitivity.

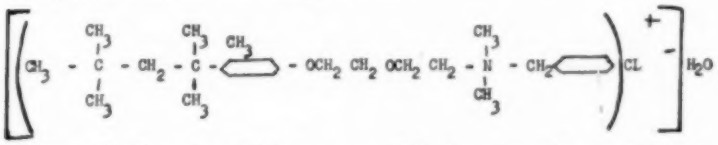
TABLE 1. *Comparison of Response Between Diaparene Chloride Ointment and Same Ointment Base Without Active Ingredient*

	NO. OF CASES	CLASSIFICATION		RESULTS			CURE RATE (Per cent)
		Mild	Severe	Healed	Improved	Unimproved	
Ointment Base With Active Ingredient	58	42	16	31	24	3	94
Ointment Base Without Active Ingredient	32	12	20	0	8	24	25

COMMENT

Several studies have attested to the absence of local irritation and sensitivity to the active ingredient.[3,4,5] In our previous study,[6] the results of patch testing fifty infants and children showed no sensitivity to the ointment.

The active ingredient of the ointment is a quaternary ammonium compound with the following formula:

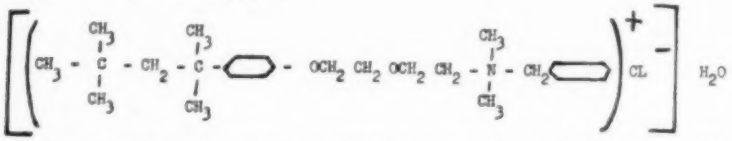


The effectiveness of this compound in the prevention and treatment of diaper rash is dependent upon its bactericidal properties against the common urea-splitting organisms.[3,4,5]

Many antiseptics lose some of their activity in the presence of organic matter. This varies with the chemical nature of the antiseptic and the type and concentration of organic matter. For instance, the common chlorine antiseptics depend on an oxidizing reaction to kill micro-organisms, and their effectiveness is greatly reduced by the presence of oxidizable organic matter. Diaparene® Chloride is not an oxidizing agent and, therefore, is not affected in this manner. However, under severe conditions of organic contamination, some of its activity may be dissipated.

A sister compound of the active ingredient having the following formula was investigated in a series of tests comparing its antiseptic activity and succinchlorimid against E. Typhosa under

standard phenol coefficient conditions and in the presence of an added 0.2 per cent peptone.



Tests were made when the solutions were 0, 8 and 24 hours old. The sister compound did not lose antiseptic activity on standing and retained more than 50 per cent of its activity in the presence of added peptone. Aqueous solutions of succinchlorimid lost 25 per cent activity on standing 24 hours. The addition of peptone immediately decreased antiseptic activity by 70 per cent and by 88 per cent in 24 hours. Succinchlorimid is one of the most stable of the chlorine-liberating antiseptics.[7]

CONCLUSIONS

In this study, comparing an ointment base with an ointment containing an active ingredient, methyl benzethonium chloride, results showed that all of the severe cases, and 93 per cent of mild cases of ammonia dermatitis, responded to treatment with the ointment containing the active ingredient. Seventy-five per cent of a control series failed to respond to treatment with the base alone; therefore, this would prove that the ointment containing the active ingredient was not inactivated on the skin.

As the hospital night diaper changes cannot be duplicated in the home when the parents are asleep, it is necessary to impregnate the night diapers with a solution made with Diaparene® Chloride Rinse Tablets.

SUMMARY

1. Ninety cases of ammonia dermatitis were studied.

2. Fifty-eight were treated with Diaparene® Chloride Ointment; 93 per cent were either cured or improved.

3. In a control group of thirty-two infants treated in the same manner and under similar conditions with the ointment base alone, only 25 per cent were benefited.

4. In the entire series of ninety infants treated there was no systemic toxicity, local irritation or sensitivity, either primary or secondary.

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SIGNIFICANCE OF PALLOR IN THE SCHOOL CHILD. (Lancet, London, 1:239, Feb. 2, 1952). The significance of pallor in children who are otherwise apparently well was investigated in about 1,200 Cambridge school children, aged 4 to 11 years. This survey shows that, compared with the child of normal color, the pale child is more likely to weigh less, to be of a lower state of nutrition, to have a lower Tuxford index, and possibly to be shorter and to have a weaker grip. The hemoglobin level is not related to pallor. A pale child is just as likely to have a high or low level of hemoglobin as a child who is not pale. The level of hemoglobin is not associated with most of the other factors studied, and the only association found was a lower level in children from larger families. In particular, levels as low as 75 per cent of the normally accepted standards may apparently exist with no untoward effect. Two explanations are suggested for the observation that the hemoglobin level was apparently independent of nutritional state, physique, or performance. One is that this represents true physiological variation, and that, in many instances, neither iron nor any other substance is the limiting factor in the production of hemoglobin. The second is that the lower levels may not be maximal but are nevertheless adequate for all bodily functions. This is supported by the observations of Magee and Milligan on the hemoglobin of women before and after labor, many of whom had low levels that could be raised by administration of iron. They observed that most of the women, whether taking iron or not, were healthy and had no complaints, which raised the question whether a hemoglabin level raised by iron therapy is an advantage.—*Journal A.M.A.*

PEDIATRICS AT THE TURN OF THE CENTURY

From time to time the Archives, which was the first Children's Journal in the English language, will reprint contributions by the pioneers of the specialty over fifty years ago. It is believed that our readers will be interested in reviewing such early pediatric thought.

TONSILLITIS A CAUSE OF NEPHRITIS*

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Within the last few years a number of papers have appeared in which the importance of tonsillitis in the etiology of acute endocarditis has been emphasized. Little attention, however, has been paid to its possible importance in the etiology of acute nephritis. Very few of the American textbooks either on internal medicine or on the diseases of children refer to it, although several speak of infectious sore throat, infectious angina or infectious tonsillitis among the more unusual causes. The German authors refer to it even less frequently than do the American. The French, on the other hand, seem to have paid more attention to it, not only in their textbooks but also in their periodical literature. It would seem reasonable that tonsillitis, being due as it is to bacterial infection and being often complicated by cervical adenitis, peritonsillar abscess, or acute inflammation of the middle ear, should lead to inflammation of the kidney as do other acute diseases due to microörganisms. An additional reason why it might naturally be followed by inflammation of the kidney is that it is usually caused by streptococci, and, as is well-known, the usual cause of acute nephritis in scarlet fever, which is more often than any other disease complicated by acute nephritis, is the streptococcus. Nevertheless, judging from the literature of this subject, tonsillitis is seldom complicated by, or the cause of, acute nephritis. During the last eight months, however, I have happened to see four cases of tonsillitis followed by acute nephritis, which leads me to believe that tonsillitis must be more often followed by nephritis than is

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usually supposed. Two of these cases were in adults, and two in children. In all it seemed possible to absolutely exclude scarlet fever or previous disease of the kidneys. The histories of these cases are as follows:

Case 1. Herbert C., twenty-eight years old, was seen January 8, 1904, in consultation with Dr. May of Newton Centre. He had had scarlet fever as a boy and had always been well and vigorous. He had passed careful life insurance examinations four years and four weeks previously. The urine was examined on both occasions. The day after the last examination he began to have a sore throat. The tonsils were very much swollen and a peritonsillar abscess in one or both was suspected. They were not opened as no pointing could be made out, but probably ruptured posteriorly. He recovered very slowly from this illness and did not feel able to go to work or to do much of anything. The symptoms were very indefinite for a time, but after about two weeks he began to complain of nausea and of oppression in the stomach. These symptoms continued and a few days before he was seen he began to have headache, which was worse in the morning. He thought that his urine was dark during the two weeks but was not sure. He had noticed nothing as to the amount. Edema appeared January 5. He was then put to bed and kept on a milk diet. The urine was high colored and contained considerable albumin, but the sediment was not examined. He passed three pints of urine during the day of January 7, but the next morning had a convulsion. He was seen in the afternoon.

Physical Examination. He was well developed and nourished. The skin had a somewhat pasty appearance. There was slight puffiness about the eyes. The tongue was somewhat coated. The heart was normal in every way; the second aortic sound was not accentuated. The pulse was full and of rather high tension. Numerous fine moist râles were heard in both bases behind. There was slight edema of the feet but none of the legs. The examination was otherwise entirely negative.

The urine was slightly smoky in color, acid, and of specific gravity of 1,012. It contained ⅛ per cent or more of albumin. The sediment showed much normal and a little abnormal blood, many small round cells and an occasional hyalin and epithelial cast. The urea was 18 grams.

Case 2. Percy P., a physican, thirty-five years old, was seen February 13, 1904, in consultation with Dr. Garland of Gloucester. He had had scarlet fever as a child. His urine had been examined several years and some months previously and found normal. Except for hip disease as a child he had always been well and strong.

He was taken suddenly sick January 21, 1904, with a sore throat. The throat was a good deal inflamed and the tonsils enlarged. There was some exudation on both. The temperature rose to 103° F. Fearing that it might be diphtheria he took a large dose of antitoxin. The throat was clear the next day, however, and no Klebs-Löffler bacilli were found. The temperature was normal on the 23d and he was out on the 24th. Although up and about his work he did not feel as well as usual. He vomited the whole of the night of February 2 but kept about his work next day although his temperature was 104° F. He noticed that the urine was dark colored, but being very busy forgot to examine it. He continued to have considerable fever and finally went to bed. He vomited again on the 6th and 7th, when his temperature began to be lower. The urine was then examined and found to be smoky and to contain a large amount of albumin. The sediment was characteristic of acute nephritis and showed no fatty elements. Since then the temperature had been normal but there had been several slight attacks of dyspnea without definite cause. There had been no vomiting. The skin had acted well. The urine was increasing in amount and was of low specific gravity.

Physical Examination. The color was good and the arteries normal. The heart was somewhat enlarged to the left and the second aortic sound slightly accentuated. There was an occasional râle in both backs. There was no edema. Examination was otherwise negative.

The urine was somewhat pale and contained a very large amount of albumin. The sediment showed a little normal and abnormal blood, very many small round mononuclear cells, a few leukocytes, many hyalin, fine granular and coarse granular casts and a few brown granular and epithelial casts. There were no fatty elements.

Case 3. Elise D., six years old, was seen December 6, 1903, in consultation with Dr. Eaton of Lowell. She had always been

pretty well. There was no scarlet fever in the neighborhood and there had been no known exposure to scarlet fever. She had a mild sore throat about the tenth of November and was taken care of by Dr. Eaton. The throat did not look like that of scarlet fever and there was no eruption or desquamation. She was up and about in a few days, but did not seem as well as usual. There was nothing very definite, however, and the doctor was not called. The mother noticed that the urine passed during the morning of November 30 was dark. She did not call the doctor as it was all right again in the afternoon. The urine was dark again on December 3, and the doctor was called the next day. Only 4 ounces were passed during the morning of December 4. This was dark and found to contain about ½ per cent of albumin, numerous casts and some leukocytes, but no free blood. The face was puffy and treatment was begun at once. Only 3 ounces were passed on the morning of December 5, and none up to the time when she was seen at noon, December 6. The bowels had moved thoroughly, and she had sweat freely. She had complained a good deal of pain in the abdomen and had vomited pretty constantly. The edema had not increased.

Physical Examination. She was fairly developed and nourished. Pallor was rather marked. She was bright and happy and somewhat excited. There was considerable puffiness of the face, especially about the eyes, but no edema elsewhere. The tongue was considerably coated and rather dry. The tonsils were much enlarged and the throat reddened, but there was no exudation. There was considerable enlargement of the glands on the right side of the neck and a great deal on the left side. The heart was normal except that the second aortic sound was a little the louder. The physical examination was otherwise negative.

Case 4. Arthur R., four years old, was seen June 3, 1903, with Dr. Holtzman of Boston. Ten days previously he had had a slight sore throat with much enlargement of the cervical glands, the enlargement of the glands being entirely out of proportion to the soreness of the throat. Cultures showed no Klebs-Löffler bacilli. The temperature was moderate. No rash was seen at any time, although it was carefully sought. There was no desquamation. There was no scarlet fever in the neighborhood and there had been no known exposure to scarlet fever. On June 1 it was

noticed that the urine was dark colored and that but little was passed. The urine continued to be brown or red and contained a considerable amount of albumin. The sediment was not examined. There had been no edema except a little about the eyes.

Physical Examination. He was well developed and nourished and of good color. There was a moderate, discrete enlargement of the cervical glands. The throat was normal, the tongue clean. The upper lids were a little puffy. The heart, lungs, liver, spleen, abdomen and extremities were normal. There was no desquamation anywhere. About 9 ounces of urine had been passed during the morning. The earlier portions were brown, the later reddish.

In the first case there can be no question of any other cause for the nephritis. In the second case it might be said that the nephritis was due to the antitoxin. This is extremely improbable, however, as all the evidence goes to show that antitoxin not only does not cause or aggravate nephritis in diphtheria but tends to prevent its development. The third and fourth cases not having had scarlet fever, it might be said that the trouble in them was not tonsillitis but scarlet fever, as it is possible to have scarlet fever without eruption, and, consequently, without desquamation. There was no scarlet fever in the neighborhood in either case, however, and as no one else in either family contracted scarlet fever, this disease can be almost positively excluded.

It is evident from these cases that tonsillitis, whether of a severe or of a mild type, may be the cause of acute inflammation of the kidneys. It is probable that tonsillitis is more often followed by nephritis than is commonly supposed, and it is very likely that in many cases which are considered primary the infection enters through the tonsils, the local manifestations not being severe and having been forgotten. This being so, tonsillitis should not be looked upon, as it usually is, as a simple disease and of but little importance. A disease which can cause acute endocarditis and acute nephritis is certainly one worthy of consideration. The heart and urine in tonsillitis should, therefore, be examined as carefully as in rheumatism or scarlet fever, and the examination kept up for a time during the convalescence.

DEPARTMENT OF ABSTRACTS

McLean, C. C.: Penicillin Suppository Treatment of Vulvovaginitis in Children. (Southern Medical Journal, 45:741, Aug. 1952).

Vulvovaginitis in little girls is at times a most difficult condition to treat especially when gram-negative intracellular organisms are found. The author, using a suppository containing 300,000 units of penicillin, treated 8 children with success. Six of the children were between 6 and 7 years, one 10 years of age and the other 11. The following routine was used in the 8 cases: (1) The mother is taught how to insert the suppository. (2) The patient is kept in bed 3 days; suppository is inserted morning and night. (3) At the end of this period, the child is allowed to resume the normal routine activity, a suppository being inserted for 3 consecutive nights. (4) Every third night for three nights. (5) Once a week for 3 weeks.

Michael A. Brescia, M.D.

Sands, D. E. and Chamberlain, G. H. A.: Treatment of Inadequate Personality in Juveniles by Dehydroisoandrosterone. Preliminary Report. (British Medical Journal, 4775:66, July 12, 1952).

Thirteen cases characterized by constitutional and emotional immaturity and some with below par mentalities were treated. The ages ranged from 12 to 17 years. These patients appeared to be the potential chronic schizophrenics or inadequate psychopathic personalities of early adult life. In addition to these, the drug was also tried in four other juveniles with aggressive trends. The drug was given at first by injection only, the dose ranging from 0.5 ml. biweekly to 2.0 ml. daily—that is 10 to 40 mg. No difference in effect was noticed when a change was made to oral administration of tablets. The effects of the drug in those who were socially and emotionally inadequate were in making them more normally confident, alert and able to mix with their fellows. Those liable to be over-aggressive in mental make-up were made worse and appeared overstimulated by the drug. In the 13 original inadequate cases, 2 recovered during treatment, 5 were much improved, 3 improved and 3 others showed only temporary gain. None were worse, as happened temporarily in the 4 aggressive cases.

Michael A. Brescia, M.D.

RACKEMANN, F. M. AND EDWARDS, M. C.: ASTHMA IN CHILDREN. A FOLLOW-UP STUDY OF 688 PATIENTS AFTER AN INTERVAL OF TWENTY YEARS. (New England Journal of Medicine, 246:858, May 29, 1952).

Of 449 children with asthma, in which the boys outnumbered the girls about 2 to 1, seen before the age of 13, 138 (30.7 per cent) cases are entirely relieved of their symptoms. The age of "cure" depends on the promptness with which the specific allergenic substances can be found and removed. Another 19.3 per cent have no symptoms because they can successfully avoid the offending cause, although they are still sensitive. Another 21.4 per cent have no further asthma, but a new symptom, usually hay fever, has developed. Nearly three-quarters of the children have become cleared of asthma in their teens. A fourth of all the patients are still in trouble, but the trouble is serious in less than an eighth of the total. Four of the 449 children died of asthma in their late twenties. Asthma in children is due to allergy, sensitiveness to foreign substances in dust and occasionally (8 per cent) to foods. In 18 per cent of the cases the history indicates trouble from head colds alone, and, when the skin tests in these cases are negative, the diagnosis of "bacterial asthma" seems indicated even though it is hard to prove. The changes in the direction of sensitiveness are typical: eczema in infancy due to foods, especially to egg and cow's milk; asthma in childhood from dusts, especially animal danders; and later hay fever from pollen. MICHAEL A. BRESCIA, M.D.

QUINN, R. W. AND KINCAID, C. K.: RHEUMATIC (VALVULAR) HEART DISEASE IN MADISON, WISCONSIN: A SURVEY OF SEVENTH GRADE SCHOOL CHILDREN. (American Journal Medical Sciences, 223:487, May 1952).

Eight hundred ninety-three seventh grade school children were examined to determine the incidence of rheumatic heart disease in this group of children. The rate was found to be 2.2 per cent. This would seem to indicate that the prevalence of rheumatic heart disease in Madison school children at this time is as high as that reported for children of similar age from other sections of the United States. Crowding in the home did not appear to influence the prevalence of rheumatic heart disease. However, a high familial incident was noted. MICHAEL A. BRESCIA, M.D.

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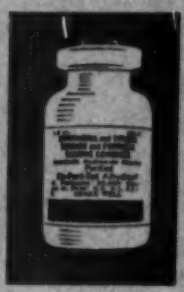

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